



Environmental Chemists, Inc.

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ANALYTICAL & CONSULTING CHEMISTS

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April 30, 2018

Brunswick County Public Utilities
Post Office Box 249
Bolivia, NC 28422
Attn: Glenn Walker

Report #2018-05348

Enclosed please find your analytical report.

Sincerely,

Tammy Duran
Environmental Chemists, Inc.

ANALYTICAL RESULTS: Perfluorinated Chemicals by EPA 537 Rev 1.1 Safe Drinking Water Analysis

Customer: Environmental Chemists NLS Project: 297379
 Project Description: PFCs with GenX by EPA 537
 Project Title: Template: 537PPTGENX Printed: 04/28/2018 12:27

Sample: 1048866 13237 Collected: 04/05/18 Analyzed: 04/13/18 - Analytes: 13

| ANALYTE NAME | RESULT | UNITS | WWB | DIL | LOD | LOQ | MCL | Note |
|--|---------|-------|-----|-----|------|-----|-----|------|
| perfluorobutanesulfonic acid (PFBS) | ND | ppt | | 1 | 6.6 | 21 | | |
| perfluorohexanoic acid (PFHxA) | 15.1 | ppt | | 1 | 1.3 | 4.0 | | |
| perfluoro-2-propoxypropanoic acid (GenX) | 6.78 | ppt | | 1 | 0.73 | 2.3 | | |
| perfluorooctanoic acid (PFHpA) | 15.6 | ppt | | 1 | 0.80 | 2.6 | | |
| perfluorohexanesulfonic acid (PFHxS) | [3.95] | ppt | | 1 | 2.8 | 8.8 | | J |
| perfluorooctanoic acid (PFOA) | 8.36 | ppt | | 1 | 1.2 | 3.9 | | |
| perfluorononanoic acid (PFNA) | [1.5] | ppt | | 1 | 1.5 | 4.9 | | J |
| perfluorooctanesulfonic acid (PFOS) | 11.4 | ppt | | 1 | 1.7 | 5.3 | | |
| perfluorodecanoic acid (PFDA) | 2.81 | ppt | | 1 | 0.90 | 2.7 | | BD |
| perfluoroundecanoic acid (PFUnA) | ND | ppt | | 1 | 1.0 | 3.0 | | |
| perfluorododecanoic acid (PFDoA) | ND | ppt | | 1 | 1.9 | 6.1 | | |
| perfluorotridecanoic acid (PFTriDA) | ND | ppt | | 1 | 3.2 | 10 | | |
| perfluorotetradecanoic acid (PFTA) | ND | ppt | | 1 | 2.8 | 8.9 | | |
| C13-PFHxA (SURR) | 78.15% | | | 1 | | | | S |
| C13-PFDA (SURR) | 91.612% | | | 1 | | | | S |

NOTES APPLICABLE TO THIS ANALYSIS:

J = Result enclosed in brackets is between LOD and LOQ, a region of less certain quantitation.
 S = This compound is a surrogate used to evaluate the quality control of a method.
 BD = Compound was detected in the laboratory method blank.
 perfluorodecanoic acid (PFDA) detected at 2 ppt.

Sample: 1048867 13238 Collected: 04/05/18 Analyzed: 04/13/18 - Analytes: 13

| ANALYTE NAME | RESULT | UNITS | WWB | DIL | LOD | LOQ | MCL | Note |
|--|---------|-------|-----|-----|------|-----|-----|------|
| perfluorobutanesulfonic acid (PFBS) | ND | ppt | | 1 | 6.6 | 21 | | |
| perfluorohexanoic acid (PFHxA) | 16.8 | ppt | | 1 | 1.3 | 4.0 | | |
| perfluoro-2-propoxypropanoic acid (GenX) | 5.99 | ppt | | 1 | 0.73 | 2.3 | | |
| perfluorooctanoic acid (PFHpA) | 17 | ppt | | 1 | 0.80 | 2.6 | | |
| perfluorohexanesulfonic acid (PFHxS) | [3.77] | ppt | | 1 | 2.8 | 8.8 | | J |
| perfluorooctanoic acid (PFOA) | 8.43 | ppt | | 1 | 1.2 | 3.9 | | |
| perfluorononanoic acid (PFNA) | [1.76] | ppt | | 1 | 1.5 | 4.9 | | J |
| perfluorodecanoic acid (PFDA) | 10.4 | ppt | | 1 | 1.7 | 5.3 | | |
| perfluoroundecanoic acid (PFUnA) | [2.55] | ppt | | 1 | 0.90 | 2.7 | | J BD |
| perfluorododecanoic acid (PFDoA) | ND | ppt | | 1 | 1.0 | 3.0 | | |
| perfluorotridecanoic acid (PFTriDA) | ND | ppt | | 1 | 1.9 | 6.1 | | |
| perfluorotetradecanoic acid (PFTA) | ND | ppt | | 1 | 3.2 | 10 | | |
| C13-PFHxA (SURR) | 78.932% | | | 1 | 2.8 | 8.9 | | S |
| C13-PFDA (SURR) | 97.833% | | | 1 | | | | S |

NOTES APPLICABLE TO THIS ANALYSIS:

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 BD = Compound was detected in the laboratory method blank.
 perfluorodecanoic acid (PFDA) detected at 2 ppt.



Analytical & Consulting Chemists

ENVIRONMENTAL CHEMISTS, INC

NCDEMR: DWQ CERTIFICATION # 94 NCDHHS: DLS CERTIFICATION # 37729

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COLLECTION AND CHAIN OF CUSTODY

Client: Brunswick County Water PROJECT NAME: 18-5348
 ADDRESS: P.O. Box 249 CONTACT NAME: GUENN WALKER PO NO:
BOUVIA, N.C. 28422 REPORT TO: SAME PHONE/FAX:
 COPY TO: email: ajenn.walker@brunswickcounty.nc.gov

Sampled By: Billy Benton SAMPLE TYPE: I = Influent, E = Effluent, W = Well, ST = Stream, SO = Soil, SL = Sludge, Other:

| Sample Identification | Collection | | Sample Type | Composite or Grab | Container (P or G) | Chlorine mg/L | LAB ID NUMBER | PRESERVATION | | | | | | ANALYSIS REQUESTED | | |
|-----------------------|------------|------|-------------|-------------------|--------------------|---------------|---------------|--------------|------|-----|-------|------|------|--------------------|------|---------------|
| | Date | Time | | | | | | Temp | NONE | HCL | H2SO4 | HNO3 | NAOH | | THIO | OTHER |
| 040518-S01 | 4-5-18 | 0827 | 17.2 | C | (P) | | 13237 | | | | | | | | | EPA 537+ GENX |
| 040518-E01 | 4-5-18 | 0827 | | C | (G) | | 13238 | | | | | | | | | |
| | | | | C | P | | | | | | | | | | | |
| | | | | G | G | | | | | | | | | | | |
| | | | | C | P | | | | | | | | | | | |
| | | | | G | G | | | | | | | | | | | |
| | | | | C | P | | | | | | | | | | | |
| | | | | G | G | | | | | | | | | | | |
| | | | | C | P | | | | | | | | | | | |
| | | | | G | G | | | | | | | | | | | |
| | | | | C | P | | | | | | | | | | | |
| | | | | G | G | | | | | | | | | | | |

Transfer Relinquished By: Billy Benton Date/Time: 4-5-18 Received By: _____ Date/Time: _____

Temperature when Received: 7.6 Accepted: _____ Rejected: _____ Resample Requested: _____
 Delivered By: Billy Benton Received By: C. K. Mueller Date: 4-5-18 Time: 1200
 Comments: TURNAROUND: _____